### PHOTOGRAPHIC INTERPRETATION REPORT



# SELECTED RADAR SITES NORTH VIETNAM

NPIC/R-58/69 AUGUST 1969

> GROUP 1: EXCLUDED FROM AUTOMATIC DOWNGRADING AND DECLASSIFICATION

#### WARNING

This document contains information affecting the national defense of the United States, within the meaning of Title 18, sections 793 and 794, of the U.S. Code, as amended. Its transmission or revelation of its contents to or receipt by an unauthorized person is prohibited by law.

#### TNTRODUCTION

This report is an NPIC study designed to present an overall view of the radar facilities in North Vietnam. It is not all-inclusive, since it will contain only those sites which have been observed on aerial photography. Fire control radar for antiaircraft artillery or missiles will not be reported.

The study is divided into four categories:

CATEGORY A. Air Warning/Ground Controlled Intercept (AW/GCI). These are multiple radar sites which contain a variety of electronic equipment and have a capability for the determination of the range, bearing, altitude, and identification, friend or foe (IFF), of aircraft. However, all sites which include a TOKEN-type or BAR LOCK-type radar will be included in this category even if associated heightfinding or IFF radar cannot be identified.

CATEGORY B. Air Search. These are normally singly deployed radars which have either limited or no heightfinding capability. Acquisition radars which are associated with AAA or SAM sites will not be reported.

CATEGORY C. Surface Search. These radars are normally deployed on high ground along the coast or on offshore islands and are used to locate and track shipping.

 $\underline{\text{CATEGORY D.}}$  Ground Controlled Approach (GCA). These radars are located at airfields and provide an all-weather capacity.

The introduction to each of the categories contains a table of contents and a small-scale plot map. A photographic analysis of the site with the status noted on the latest coverage, a large-scale plot map, and a photograph are provided for each site.

The type of photography utilized in this report limits mensuration; therefore, all measurements are necessarily approximate.

Since most radar equipment in North Vietnam is mobile and may be readily moved from one location to another, sites will not be deleted from the report and no attempt will be made in this report to indicate the current operational status of any radar site.

Since one Basic Encyclopedia (BE) number frequently refers to several radar sites which have previously been reported under different names, this report will attempt to include both the BE-associated name and the local name previously used. This report will also use the geographic coordinates of the particular site rather than those currently used in the BE.

This report will be produced in cumulative increments and when complete will replace NPIC/R-32/67 (Southeast Asia Activity Report, Selected Radar Sites, North Vietnam). Periodic changes will be produced as necessary.

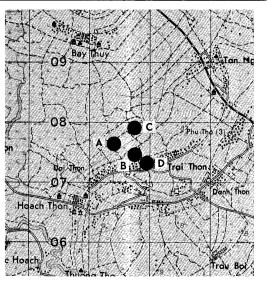
INSTALLATION OR ACTIVI	TYNAME			C	OUNTRY
Bai Thuong/	Trai Thon AW/GCI Radar Faci	.lity	25X1A		$\Lambda$ M
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NUMBER	COMIREX NO.	NIETB NO.
WH665077	19-58-00N 105-38-14E				
MAPREFERENCE					

AMS. Series L7014, Sheet 6148-IV, scale 1:50,000

LATEST IMAGERY USED NEGATION DATE (If required)

The facility, located near Trai Thon and 10.8 nm NE of Bai Thuong Airfield, consists of four areas. Area A has two vehicle revetments at UTM WH664077, Area B has a radar mound and two vehicle revetments at UTM WH668075, Area C has two vehicle revetments at UTM WH667079, and Area D has a vehicle revetment and two other revetments at UTM WH669073.

This facility was occupied on by a MOON FACE in Area A, a STONE CAKE in Area B, two unidentified vehicles in Area C, and the status of Area D was undetermined.



NA



25X1D

25X1D

25X1D

## Approved For Release 2000/05/10 : CIASTORIE 04360A006800010053-6 NO FOREIGN DISSEM

CATEGORY A

AIR WARNING/GROUND CONTROLLED INTERCEPT

The North Vietnamese AW/GCI radar site normally consists of an air search radar and a heightfinder. The most frequently observed combinations are the BAR LOCK or BIG BAR air search radars with the SIDE NET heightfinder, and the MOON FACE air search radar with ROCK CAKE/STONE CAKE heightfinder. The BAR LOCK/SIDE NET combination will often have one or more backup air warning radars such as the KNIFE REST B, SPOON REST A, or FLAT FACE radar.



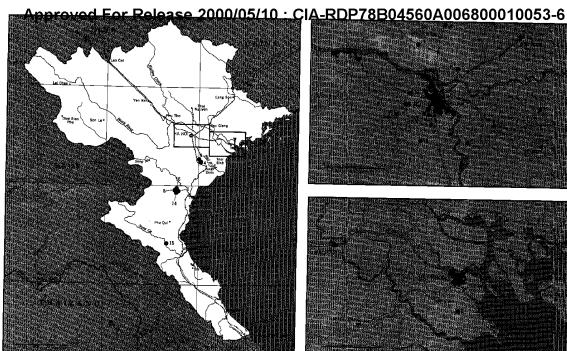
REQUIREMENT

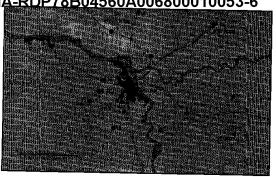
DIA 77-8 (DIAXX-2) NPIC Project: 250134

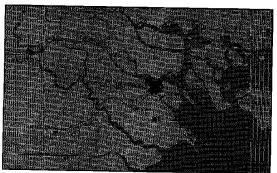
25X1D



NPIC/R-58/69







MAP KRY	INSTALLATION NAME
1	Bai Thuong/Trai Thon
2	Thuy Huong
3 5 6	Ha Dong/Bac Mai
1 <sub>4</sub>	Phu Ly/Hung Yen
5	Hanoi/Bac Mai
6	Haiphong Kien An
7 8	Hanoi/Duc Tu
8	Bai Thuong/Tinh Thon
9	Phue Thuy
10	Phuc Yen/Duc Heu

	BE :	NUMBER	
-25	5 X	1A	

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A-3 A-5 A-7 A-9 A-11	CTIVE PAGE (Original) (Original) (Original) (Original) (Original)	MAP KEY 11 12 13 14 15
A-15 A-17 A-19	(Original) (Original) (Original) (Original) (Original)	16 17 18 19 20

INSTALLATION NAME Bach Mai/Nhan My Bach Mai/Phu Dien Ha Dong
Bai Thuong/Dong Phong
Cam Ngoe/LE Nghia Duyen Thuong
Hanoi/Thuy Ha Nghia Xa/Dong Ngoai
Ha Dong Sieu Quan
Thuong Che/Hong Cau

BE	NUMBER	

A-23 A-25 A-27 A-29 A-31 A-33	(Original) (Original) (Original) (Original)
A-20	Criginal
A-Ey	(ALTRIBAT)
A-35	(Original)
A-37	(Original)
A-39	(Original)
A-41	(Original)

25X1A

A-2

SECRET

Thuy Huong AW/GCI Radar Facility 25X1A

UTM COORDINATES GEOGRAPHIC COORDINATES

WJ974127 20-54-50N 105-56-12E

MAPREFERENCE

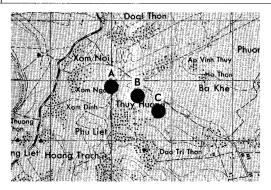
AMS. Series L7014, Sheet 6150-I, scale 1:50,000

LATEST IMAGERY USED NEGATION DATE III rec

25X1D

The facility located 8.6 nm SE of Hanoi, consists of three areas. Area A has one radar mound and two vehicle revetments at UTM WJ970129, Area B has one radar mound and four vehicle revetments at UTM WJ974127, and Area C has three vehicle revetments.

This facility has not been observed occupied on photography. The latest coverage, on did not show Area C.



ΝA



25X1D

INSTALLATION OR ACTIV	TYNAME			C	OUNTRY
Ha Dong/Bac	Mai AW/GCI Radar Facility		25X1A		VIV
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NUMBER	COMIREX NO.	NIETB NO.
WJ865177	20-57-36N 105-50-00E				
MAPREFERENCE					

AMS. Series L7014, Sheet 6150-I, scale 1:50,000

LATEST IMAGERY USED | NEGATION DATE (frequired)

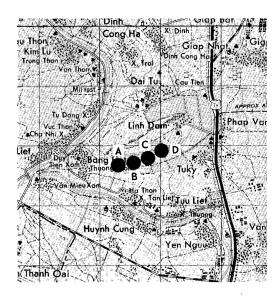
25X1D

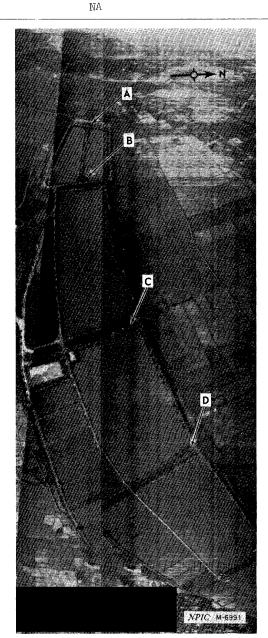
The facility, located 1.9 nm south of Hanoi/Bac Mai Airfield, consists of four areas. Area A has one radar mound at UTM WJ863177, Area B at UTM WJ865177, Area C at UTM WJ867178, and Area D at UTM WJ870179. Areas B, C, and D are unrevetted.

This facility was occupied in by a BAR LOCK radar in Area A, a SIDE NET radar in Area B, a SPOON REST radar in Area C, and a FLAT FACE radar in Area D. The installation was unoccupied on

25X1D

25X1D





Phu Ly/Hung Yen AW/GCI Radar Facility

UTM COORDINATES

XH076736

20-33-35N 106-02-05E

MAP REFERENCE

AMS. Series L7014, Sheet 6250-III, scale 1:50,000

LATEST IMAGERY USED NEGATION DATE (If requir

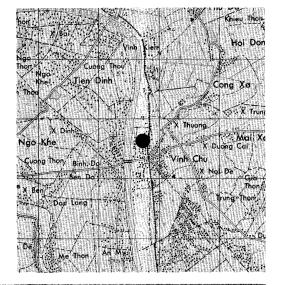
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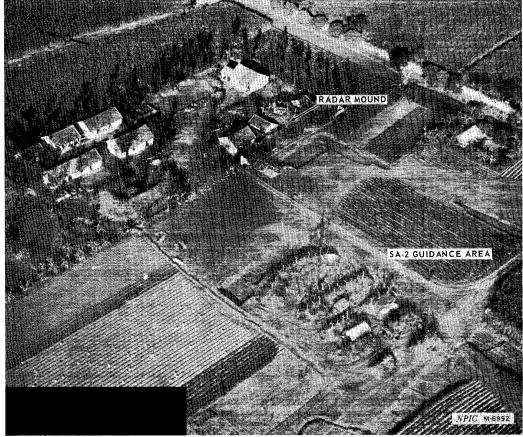
25X1D

The facility, located 5.4 nm SSW of Hung Yen, consists of a radar mound near the guidance area of Hanoi SAM Site 317, two vehicle revetments, and a storage revetment.

This facility was occupied by a MOON FACE radar in the guidance area and a ROCK CAKE/STONE CAKE radar on the mound in however, it was

25X1D the mound in 25X1D unoccupied on





Hanoi/Bac Mai Airfield AW/GCI Radar Facility 25X1A VN

UTM COORDINATES GEOGRAPHIC COORDINATES UJ867211 20-59-28N 105-50-05E

MAP REFERENCE

AMS. Series L7014, Sheet 6150-I, scale 1:50,000

LATEST IMAGERY USED

HON DATE III required

25X1D

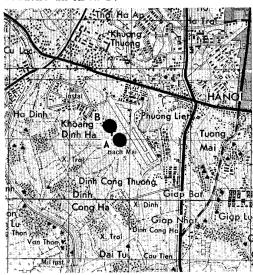
25X1D

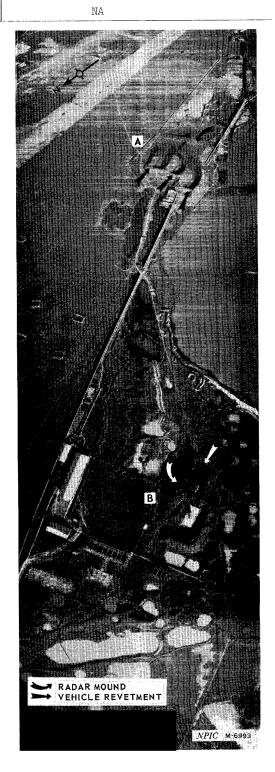
25X1D

The facility, located at Hanoi/Bac Mai Airfield, 2.0 nm SSW of Hanoi, consists of two areas. Area A has one radar mound and three vehicle revetments at UTM WJ868211 and Area B has one radar mound and one vehicle revetment at UTM WJ866212.

This facility was occupied by a BIG BAR radar, a ROCK CAKE/STONE CAKE radar, and a KNIFE REST B radar in

It was unoccupied on although three MERCURY GRASS antennas and two associated van trucks were evident in Area B.





INSTALLATION OR ACTIVIT	YNAME		COUNTRY
Haiphong Kie	en An AW/GCI Radar Facility	25X1A	AM
UTM COORDINATES	GEOGRAPHIC COORDINATES		
хн759962	20-45-20N 106-41-21E		
MAP REFERENCE			

Series L7014, Sheet 6350-IV, scale 1:50,000

REGATION DATE Of required 1

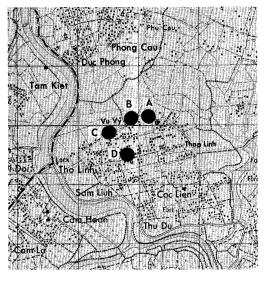
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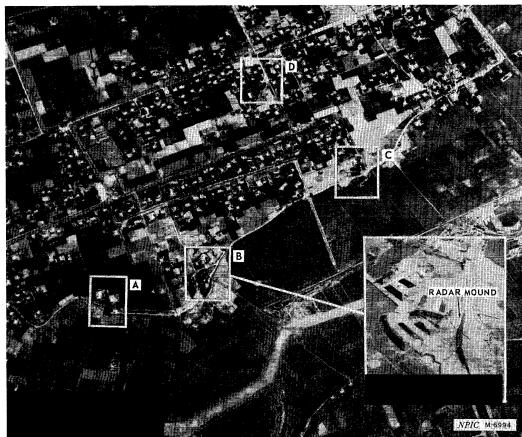
25X1D

The facility, located 6.4 nm south of Haiphong, consists of three areas. Area A has two vehicle revetments at UTM XH762962, Area B has a radar mound, four vehicle revetments, and two storage revetments at UTM XH758961, Area C has a radar mound and two vehicle revetments at UTM XH755959, and Area D has two vehicle revetments at UTM XH757956.

This facility was occupied by BAR LOCK, SIDE NET, FLAT FACE, and KNIFE 25X1D REST B radars in however, it was unoccupied on

25X1D





25X1D

25X1D

A-13

INSTALLATION OR ACTIVITY NA	AME	25X1A	COUNTRY
Hanoi/Duc Tu .	AW/GCI Radar Facility		AM
UTM COORDINATES	GEOGRAPHIC COORDINATES		
WJ940356 Mapreference	21-07-17N 105-54-15E		

AMS. Series L7014, Sheet 6151-II, scale 1:50,000

ATEST IMAGERY USED NEGATION DATE (If require

25X1D

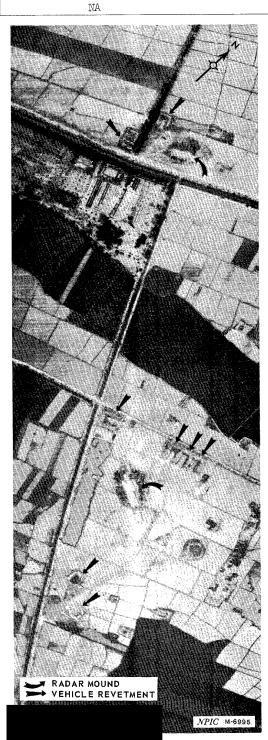
The facility, located in Duc Tu, 6.7 nm NNE of the Hanoi railroad yard, consists of two radar mounds and eight vehicle revetments. Some evidences of a former AAA site are still

present.

This facility was occupied by a BAR LOCK and a SIDE NET radar in early however, it was unoccupied on

25X1D 25X1D





INSTALLATION OF ACTIVITY NAME

Bai Thuong/Tinh Thon AW/GCI Radar Facility

UTM COORDINATES

WH532039

MAP REFERENCE

COUNTRY

VN

VN

AMS. Series L7014, Sheet 6148-IV, scale 1:50,000

LATEST IMAGERY USED NEGATION DATE (If requir

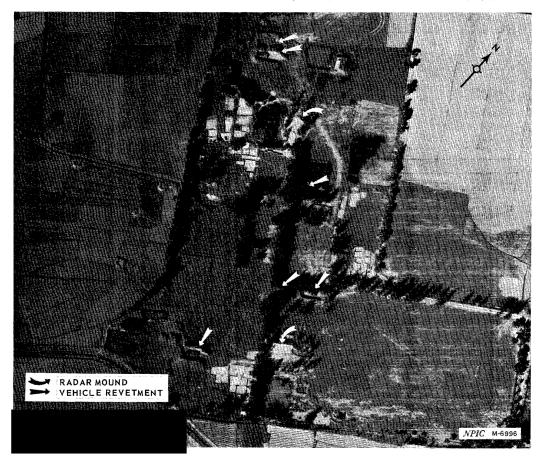
Mark and the second second

The facility located at Tinh Thon, 2.7 nm NE of Bai Thuong airfield, consists of two radar mounds, six vehicle revetments, and two storage revetments.

The facility has been occupied by a BAR LOCK and a SIDE NET radar; how-25X1D ever, it was unoccupied on Ven Larig Thuong Dong Thuong Yen Mung Phán Dong Thon (3) Le Trach

Yen Larig Thuong Yen (1) Kien Phuc Phuc Thuong Phot Cod Phu Xuan Diong Phot Xuan Pho (2) Xuan Phot (3) Xuan Phot (3)

NA



25X1D

INSTALLATION OR ACTIVITY NAME		COUNTRY	
Phuc Thuy A	W/GCI Radar Facility	25X1A	VN
UTM COORDINATES	GEOGRAPHIC COORDINATES		
XH047782	20-36-04N 106-00-20E		
MAP REFERENCE			

AMS. Series L7014, Sheet 6250-III, scale 1:50,000

LATEST IMAGERY USED

25X1D

The facility, located immediately SW of Phuc Thuy and 14.4 nm NW of Nam Dinh, consists of three areas. Area A has one radar mound and three vehicle revetments at UTM XHO44784, Area B has one radar mound and two vehicle revetments at UTM XHO47782, and Area D has three vehicle revetments at UTM XH051778.

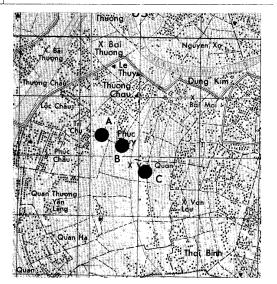
This facility was occupied by a platform-mounted CROSS SLOT radar on the mound in Area A in early however, it was unoccupied on

25X1D

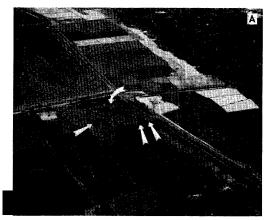
25X1D

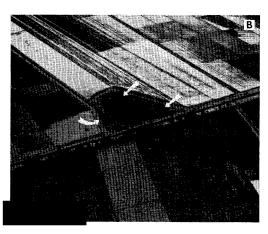
25X1D

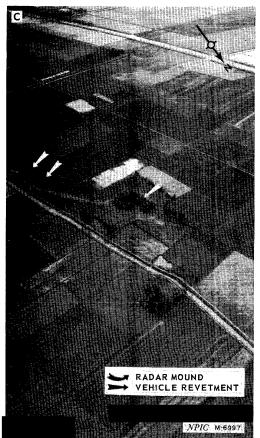
25X1D



NA







25X1D

25X1D

A-19

Phuc Yen/Duc Hau AW/GCI Radar Facility

UTM COORDINATES

GEOGRAPHIC COORDINATES

WJ918484

21-14-12N 105-53-04E

MAPREFERENCE

COUNTRY

UTM COORDINATES

GEOGRAPHIC COORDINATES

CATEGORY

BE NUMBER

COMIREX NO. NIETB NO.

AMS. Series L7014, Sheet 6151-II, scale 1:50,000

LATEST IMAGERY USED NEGATION DATE (If required)

25X1D

The facility, located 4.3 nm ENE of the Phuc Yen Airfield, consists of four areas. Area A has one radar mound and four vehicle revetments at UTM WJ914487, Area B has one radar mound and two vehicle revetments at UTM WJ913480, Area C has two vehicle revetments at UTM WJ919480, and Area D has two vehicle revetments at UTM WJ919486. An additional vehicle revetment is located just east of Area A.

This facility was occupied in by BIG BAR, SIDE NET, FLAT FACE, and KNIFE REST B radars; however, it was unoccupied on

NA



25X1D

25X1D

INSTALLATION OF ACTIVITY NAME

Bach Mai/Nhan My AW/GCI Radar Facility 25X1A VN

UTM COORDINATES GEOGRAPHIC COORDINATES
WJ789249 21-01-33N 105-45-34E

AMS. Series L7014, Sheet 6151-II, scale 1:50,000

LATEST IMAGERY USED

NEGATION DATE III required

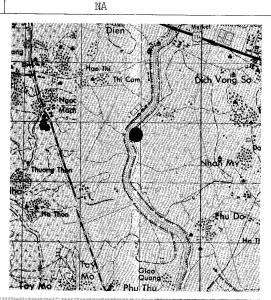
25X1D

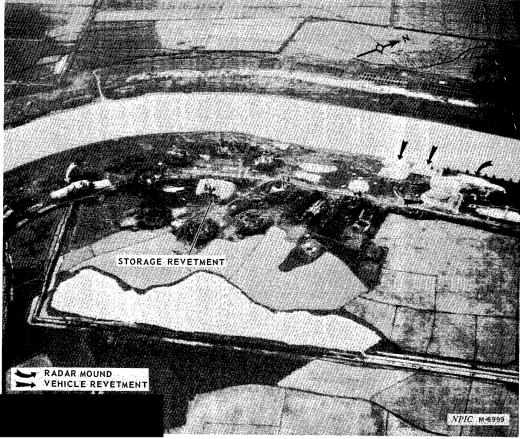
The facility, located 1.0 nm WNW of Nhan My and 3.8 nm west of the Hanoi Railroad Yards, has recently been rebuilt and consists of two radar mounds, one with four adjacent vehicle revetments, and one storage revetment. The site is located at a former AAA site with the AAA-associated revetments still present.

This facility was occupied by BIG BAR, SIDE NET, and MOON FACE radars 25X1D in however, it

was unoccupied on

25X1D





INSTALLATION OR ACTIVITY NAME			COUNTRY		
Bach Mai/P	hu Dien AW/GCI Radar Facili	ty	25X1A		VIV
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NUMBER	COMIREX NO.	NIETB NO.
WJ806280	21-03-06N 105-46-29E				
MAP REFERENCE					

AMS. Series L7014, Sheet 6151-II, scale 1:50,000

LATEST IMAGERY USED

NEGATION DATE (If required)

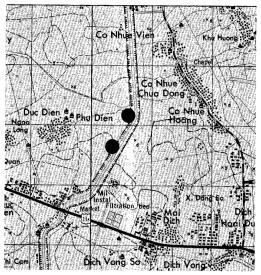
NA

25X1D

The facility, located 0.6 nm east of Phu Dien and 4.2 nm WNW of Hanoi, consists of two areas. Area A has one radar mound with two vehicle revetments at UTM WJ806282 and Area B has one radar mound with four vehicle revetments at UTM WJ804277.

This facility was occupied by a BAR LOCK and a SIDE NET radar on  $\,$ 

25X1D





INSTALLATION OR ACTIVITY NAME

Ha Dong AW/GCI Radar Facility

UTM COORDINATES GEOGRAPHIC COORDINATES

WJ757219 20-59-52N 105-43-42E

MAP REFERENCE

AMS. Series L7014, Sheet 6150-IV, scale 1:50,000

LATEST IMAGERY USED NEGATION DATE (If required)

25X1D

25X1D

The facility, located 2.6 nm NW of Ha Dong and 5.2 nm west of the Hanoi/Bac Mai Airfield, consists of two radar mounds, one with four adjacent vehicle revetments and one with two vehicle revetments. One additional vehicle revetment is located just east of the site and two vehicle revetments are located 500 yards north of the site.

This facility has been occupied 25X1D almost continually since

by a BAR LOCK and a SIDE NET radar; however, on it was occupied by a BAR LOCK and a SPOON REST radar.

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See Thore See Lung

Yen The

Your Lung

Your Lung

Your Lung

Your Ma

Tay Mo

La Dvong

A Name of the Tipe Cau

La Dvong

X Lang Tren A

NA



NO FOREIGN DISSEM

INSTALLATION OF ACTIVITY NAME

Bai Thuong/Dong Phong AW/GCI Radar Facility

UTM COORDINATES

WG604992

MAPREFERENCE

COUNTRY

VII

VII

VII

MAPREFERENCE

AMS. Series L7014, Sheet 6148-IV, scale 1:50,000

LATEST IMAGERY USED

NEGATION DATE (If required)

25X1D

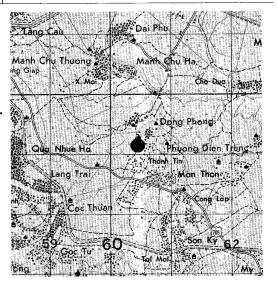
25X1D

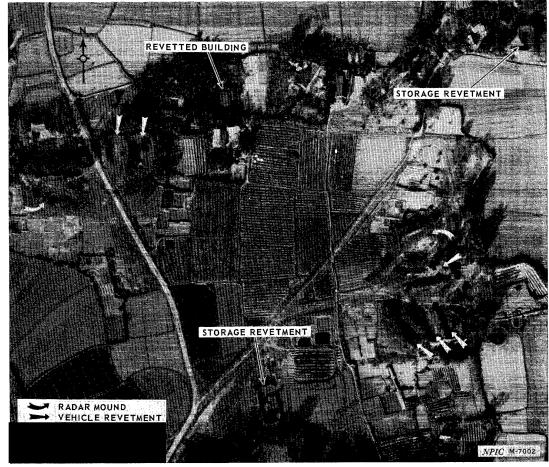
25X1D

NA

The facility, located adjacent to the village of Dong Phong and 10.6 nm east of Bai Thuong, consists of two radar mounds, one with four adjacent vehicle revetments and one with two adjacent vehicle revetments. One revetted building (without a roof) and two storage revetments are also present.

This facility formerly consisted of two pairs of vehicle revetments and was occupied in two by a MOON FACE radar; however, it was unoccupied on





25X1D

A-29

Country

Cam Ngoc/Le Nghia AW/GCI Radar Facility 25X1A

UTM COORDINATES GEOGRAPHIC COORDINATES

WF393849 18-51-30N 105-22-25E

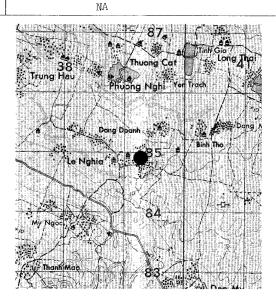
MAPREFERENCE

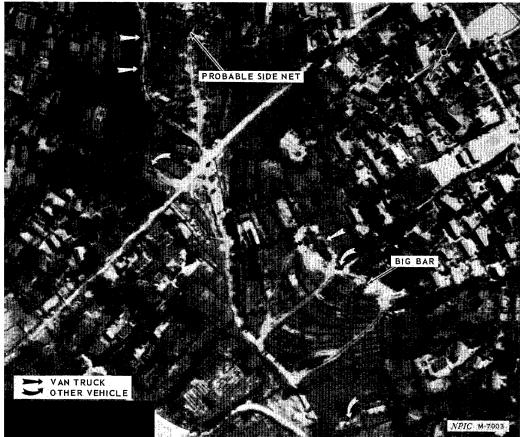
AMS. Series L7014, Sheet 6046-I, scale 1:50,000

LATEST IMAGERY USED NEGATION DATE (If require

The facility, located in Le Nghia, 4.7 nm SE of Cam Ngoc, consists of a BIG BAR and a probable SIDE NET radar located on a low hill. There are no revetments present; however the van trailers are positioned so as to be partially protected by the terrain.

This facility was occupied by a BIG BAR and a SIDE NET radar, four van trailers, one unidentified vehicle, one tracked prime mover, and one cargo truck on





25X1D

25X1D

Duyen Thuong AW/GCI Radar Facility

UTM COORDINATES

WH657109

19-59-43N 105-37-43E

MAPREFERENCE

25X1A

AMS. Series L7014, Sheet 6148-IV, scale 1:50,000

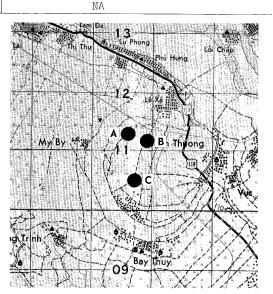
LATEST IMAGERY USED

NEGATION DATE (If required)

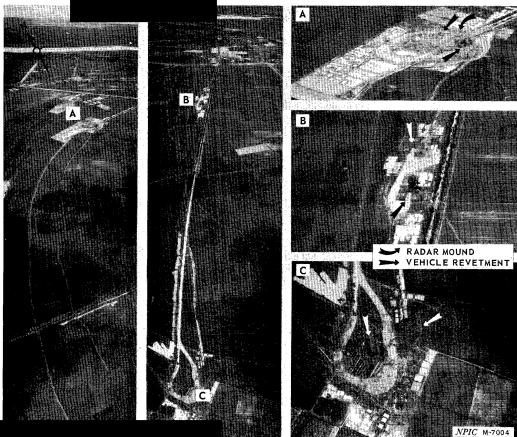
25X1D

The facility located near Duyen Thuong, 13.8 nm NE of Thanh Hoa, consists of three areas. Area A has one radar mound and two vehicle revetments at UTM WH656113, Area B has two vehicle revetments at UTM WH659112, and Area C has two vehicle revetments at UTM WH657105.

This facility has not been observed occupied although it probably is an alternate location for the MOON FACE and STONE CAKE radars located at Bai Thuong/Trai Thon AW/GCI Radar Facility (page A-3).



25X1D



25X1D

A-33

INSTALLATION OR ACTIVITY NAME		25X1A	COUNTRY
Hanoi/Thuy Ha AW/GCI Radar Facility			VN
UTM COORDINATES WJ832424	GEOGRAPHIC COORDINATES 21-11-00N 105-48-08E		
MAPREFERENCE			

AMS. Series L7014, Sheet 6151-II, scale 1:50,000

LATEST IMAGERY USED

NEGATION DATE (If required)

25X1D

25X1D

This facility, located immediately west of Thuy Ha and 2.2 nm south of the Phuc Yen airfield, consists of two

mounds, one with four adjacent vehicle revetments and one with two adjacent vehicle revetments. A storage revetment is located between the radar

mounds.

This facility has been occupied by BAR LOCK and SIDE NET radars with a KNIFE REST B on the edge of a nearby village; however, only the BAR LOCK and SIDE NET could be identified

Huong Gid

Thus Ho Ben Chung

NA

STORAGE REVETMENT

PHUC YEN ARFIELD
2.2 NM

APIC Nº-7005

INSTALLATION OF ACTIVITY NAME

Nghia Xa/Dong Ngoai AW/GCI Radar Facility

UTM COORDINATES GEOGRAPHIC COORDINATES

XJ192230 21-00-20N 106-08-40E

MAP REFERENCE

AMS. Series L7014, Sheet 6251-II, scale 1:50,000

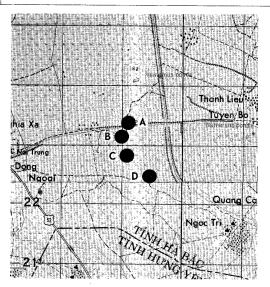
LATEST IMAGERY USE

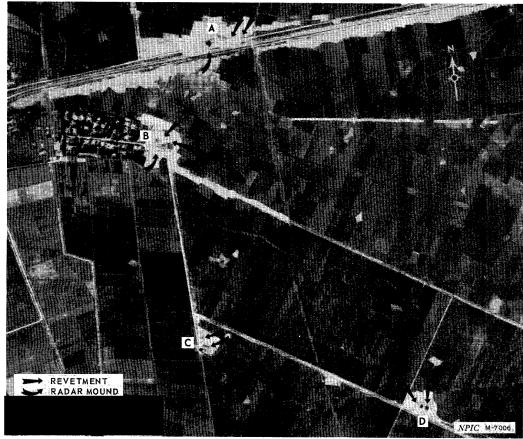
NEGATION DATE (If required)

25X1D

The facility, located 1.3 nm east of Dong Ngoai and 12.1 nm SSW of Bac Ninh, consists of four areas. Area A has one radar mound, three vehicle revetments, and one storage revetment at UTM XJ191234, Area B has one radar mound and two vehicle revetments at UTM XJ190232, Area C has two vehicle revetments at UTM XJ191228, and Area D has two vehicle revetments at UTM XJ195225.

This facility has never been observed occupied.





INSTALLATION OF ACTIVITY NAME

Ha Dong/Sieu Quan AW/GCI Radar Facility

UTM COORDINATES

WJ8 37137

GEOGRAPHIC COORDINATES

20-55-20N 105-48-20E

AMS. Series L7014, Sheet 6150-I, scale 1:50,000

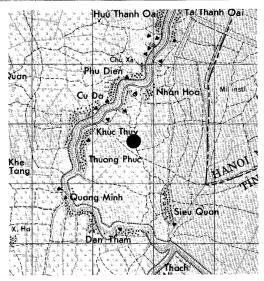
LATEST IMAGERY USED NEGATION DATE (If requir

25X1D

The facility, located 3 nm SSE of Ha Dong, near the village of Sieu Quan, consists of two radar mounds, one with three vehicle revetments and one with two vehicle revetments. The facility was constructed on the site of a former AAA site and some AAA revetments are still present.

This facility was occupied by a BAR LOCK and a SIDE NET radar on

25X1D



NA



INSTALLATION OR ACTIVITY NAME

Thuong Che/Hong Cau AW/GCI Radar Facility

VN

Thuong Che/Hong Cau AW/GCI Radar Facility
UTMCOORDINATES GEOGRAPHIC COORDINATES

XJ063177 MAP REFERENCE

AMS. Series L7014, Sheet 6250-IV, scale 1:50,000

20-57-32N 106-01-22E

LATEST IMAGERY USED NEGATION DATE (If required)

25X1D

The facility, located on the SW edge of Hong Cau, consists of three areas. Area A has one radar mound with two vehicle revetments (one long) at UTM XJ064178, Area B has one radar mound and two vehicle revetments at UTM XJ061175, and Area C has two vehicle revetments

at UTM XJ067176.
This facility was occupied by
BAR LOCK, SIDE NET, and KNIFE REST B

25X1D radars on A probable discone VHF communications antenna was also observed.

Hooh Loe

Thanh Dani

Dong Nghe

Xuan tol Dong Nghe

Hoong Nhrq S

Frung County A

are The Ngo Mau B

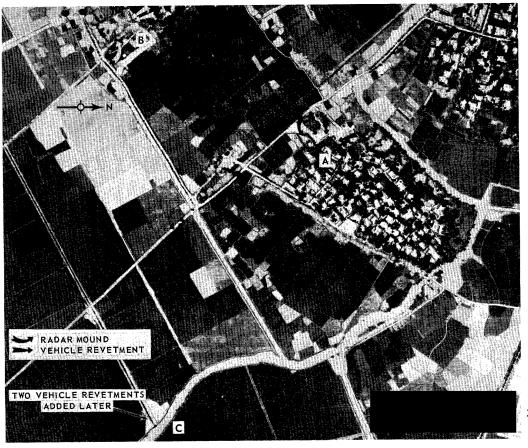
Ayon Tru

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riew Dong

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ΝA



25X1D

A-41

Approved For Release 2000/05/10 : CIA-RDP78B04560A006800010053-6